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10/771,653

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EXAMINER

GEE, JASON KAI YIN

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/771,653	<b>Applicant(s)</b> BRUMME ET AL.	
	<b>Examiner</b> JASON K. GEE	<b>Art Unit</b> 2434	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 04 February 2009.
- 2a) ☒ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-48 is/are pending in the application.
- 4a) Of the above claim(s) 17-46 is/are withdrawn from consideration.
- 5) ☐ Claim(s) 47 and 48 is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

***DETAILED ACTION***

1. This action is response to communication: amendment received 05/26/2009.
2. Claims 1-16 and 47-48 are current pending in this application. Claims 17-46 have been withdrawn. .
3. No new IDS has been received.

***Response to Arguments***

4. Applicant's arguments filed 05/26/2009 have been fully considered but they are not persuasive.

The applicants have argued that the AAPA does not teach wherein the identification is a user identification. However, this is still taught by Fee, as seen in the previous rejection for claim 2. Fee is relevant art, and it would have been obvious to combine Fee, as Fee is directed toward applying security policies to determine whether given code assemblies may be trusted. As taught in Fee paragraphs 8 and 9, this would allow flexibility to determine which assemblies to be trusted and would increase the security of the system.

5. The applicants' arguments with regards to amended claims 47 are persuasive and the previous rejections have been withdrawn.

***Claim Rejections - 35 USC § 112***

6. The previous 112 rejections have been withdrawn in response to applicant's amendments and arguments.

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1, 2, 4, and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over the Applicant's Admitted Prior Art (hereinafter the AAPA), and in view of Fee US Patent Application Publication 20030041267 (hereinafter Fee).

As per claim 1, the AAPA (used the paragraphs from publication) teaches an apparatus comprising instantiating in a managed code to execute with a runtime loader (paragraphs 2 and 3 of publication), for executing first and second assemblies of the one or more of the files instantiated in the managed code (paragraphs 2, 3, 4, and 5); means for making a call for access by the first assembly of the one or more files instantiated in the managed code to the second assembly of one or more files instantiated in the managed code (paragraphs 4 and 5); and means, based upon an ID for at least one of the first and second assemblies of the one or more files, for determining access privileges of the first assembly of the one or more files to the second assembly of one or more files (paragraphs 4 and 6).

However, at the time of the invention, the AAPA does not explicitly teach virtual machine means. However, this is taught throughout Fee, such as in paragraph 30. Further, Fee teaches the use of security policies relating to user identifiers such as in paragraphs 37, 55, 58, and 72.

At the time of the invention, it would have been obvious to one of ordinary skill in the art to combine the AAPA and the Fee references. One of ordinary skill in the art would have been motivated to include virtual machine means and user identifiers associated with security policies to dynamically and flexibly determine whether an assembly may be trusted with some amount of access to the user's system, as this would increase security. (Fee paragraph 8).

As per claim 2, the AAPA teaches an execution engine, instantiated in a native code, to execute the virtual machine in runtime; a compiler to compile each of the first and second assemblies into native code for execution as native code (paragraph 3 of AAPA, wherein managed code is compiled into native code prior to execution). As seen in the AAPA, all the managed code is compiled into native code before runtime. As seen in Fee, such as in the abstract and throughout the reference, code is executed in runtime, and as seen in paragraphs 31, 32, and throughout the reference, an operating system is run in this environment to execute the assemblies.

As per claim 4, Fee teaches wherein the means for determining access privileges further comprise: means for preventing the access of the first assembly to the second assembly when the determination based upon the ID for at least one of the first and

second assemblies is unfavorable based upon predetermined criteria for the respective IDs (paragraphs 34, 42, 54, 64, 67, 68, and also AAPA paragraphs 4 and 6).

As per claim 5, Fee teaches wherein the means for determining access privileges further comprises: means for preventing the access of the first assembly to the second assembly when the ID for the first assembly does not match the ID for the second assembly based upon a predetermined match criteria for the respective IDs (paragraphs 34, 42, 54, 64, 67, 68, and also AAPA paragraphs 4 and 6).

9. Claims 3, 7, 14, 15, 16, and 48 are rejected under 35 U.S.C. 103(a) as being unpatentable over the AAPA and Fee combination as applied above, and further in view of Bromley et al. US Patent No. 7,266,677 (hereinafter Bromley).

As per claim 3, Fee teaches an execution engine means, in a native code portion, for executing the virtual machine means in runtime (abstract, paragraph 9, 25, 31), means, in a native code portion, for providing an operating system to be executed with the virtual machine means (paragraph 30, 31, and 33). For further details on "native" code, which is also known as machine code or assembly code, Bromley teaches these limitations, such as in col. 3 line 60-col. 4 line 4; col. 11 line 52 to col. 12 line 15; col. 12 line 35-col. 12 line 52; col. 12 line 45 to col. 13 line).

At the time of the invention, it would have been obvious to one of ordinary skill in the art to combine the teachings of the AAPA combination with Bromley. One of ordinary skill in the art would have been motivated to perform such an addition to allow

flexibility in systems, as it allows systems to communicate with each other when they operate in different operating environments (col. 2 lines 21-37). The references deal with communications across different networks that utilize assemblies.

As per claim 7, Fee teaches the means for determining access privileges further comprising means for permitting the access of the first assembly to the second assembly when the ID for the first assembly matches the ID for the second assembly based upon a predetermined match criteria for the respective IDs (paragraphs 34, 42, 54, 64, 67, 68, and also AAPA paragraphs 4 and 665). Bromley teaches wherein the assemblies from an intermediate language code and meta data are compiled into native code (col. 11 line 53 to col. 12 line 14; col. 12 line 35 to col. 13 line 5). Although metadata is not explicitly taught, it would have been obvious and common sense to compile all necessary information into native code. Bromley teaches that the necessary information is compiled into native code, and thus, it would have been obvious and common sense to convert meta data, if needed, into native code as well if this data needed to be utilized. A CLR loader is also taught in paragraph 3 of the AAPA.

Further, Bromely teaches the means for executing the compiled native code in the native code portion, wherein the first assembly accesses the second assembly (col. 12 lines 1-14, and the accessing of assemblies taught throughout Bromley and Fee).

As per claim 14, Bromley teaches wherein the execution engine means in the native code portion further comprises a compiler to compile each said assembly into native code for execution by the native code portion (col. 3 lines 60-col. 4 line 4; col. 11 line 52 to col. 12 line 15; col. 12 line 35 to col. 12 line 52).

Claim 15 is rejected using the same basis of arguments used to reject claim 7 above. Further, the AAPA teaches JIT that compilers may be used to compile code.

As per claim 16, Bromley teaches means, in the native code portion, for forming a response to the call. , and means for returning the response to the first assembly in the managed code portion (col. 3 lines 60-col. 4 line 4; col. 11 line 52 to col. 12 line 15; col. 12 line 35 to col. 12 line 52).

10. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over the Fee, AAPA, and Bromley as applied, and further in view of Segarra et al. US Patent No. 4,430,699 (hereinafter Segarra).

As per claim 6, the AAPA combination teaches preventing access of the first assembly to the second assembly, but does not explicitly teach wherein the rules are based upon application domains. However, this is taught by Segarra, such as in col. 34 lines 30-40.

At the time of the invention, it would have been obvious to one of ordinary skill in the art to combine the Segarra reference with the AAPA combination. One of ordinary skill in the art would have been motivated to perform such an addition to allow more security options to be available. As multiple systems are communicating with each other, it would be obvious to not allow systems with different application domains to communicate with each other, as it may lead to security problems. Further, Segarra deals with computer networks communicating with one another, and these teachings coincide with the teachings of the AAPA and Fee.



11. Claims 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over the Fee combination as applied above, and further in view of Hardman et al. US Patent no. 2004/0059941 (hereinafter Hardman)

As per claim 8, the Bromley combination does not explicitly teach permitting access of the first assembly to the second assembly when a previous said access has been permitted. However, this type of access control is well known in the art, and is illustrated by Hardman in paragraph 51.

At the time of the invention, it would have been obvious to one of ordinary skill in the art to combine the teachings of Hardman with the Fee combination. One of ordinary skill in the art would have been motivated to perform such an addition to save time. As a user has already been authenticated once, it would not always be necessary to authenticate the user again once he's been authenticated. This would save time and processing speed. These type of access controls are well known in the art. Further, it teaches in paragraph 10 that it would be beneficial to provide one-time authorization and access to systems.

As per claim 9, Hardman teaches wherein the previous said access had been permitted following a prior said determination that was favorable based upon a predetermined comparison criteria for the respective IDs (paragraph 26).

12. Claims 10-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over The Fee combination as applied above, and further in view of Borza US Patent No. 6,076,167 (hereinafter Borza)

As per claim 10, means for compiling at least one of the first and second assemblies into native code is taught by Bromley, such as in col. 12 as described earlier. Further, permitting the means for compiling to compile at least one of the first and second assemblies into native code is taught by Bromley in col. 12 lines 35-col. 13 line 5. However, at the time of the invention, the Bromley combination does not explicitly teach accuracy means, prior to the means for determining access privileges, for determining whether the ID is accurate for the first and second assemblies. However, checking accuracy means before determining privileges and delaying the determination until the ID is accurate is taught in Borza col. 12 lines 45-55.

At the time of the invention, it would have been obvious to implement the ideas taught by Borza with the Fee combination. One of ordinary skill in the art would have been motivated to perform such an addition to provide a method for securely transmitting data and for securely transmitting data across a network that is capable of real time modification in order to increase security (col. 2 lines 1-7).

As per claim 11, the combination of Borza with the Bromley combination teaches these limitations of the claims. Fee and the APPA teaches that the assemblies are able to communicate after IDs are checked and accurate, as seen in the arguments above.. Bromley then teaches that the code is compiled into native code for runtime in col. 12 lines 1-14 and col. 12 lines 40-67. Also shown in col. 13 lines 15-24.

As per claim 12, Borza teaches in col. 12 lines 45-55 that the ID's must be accurate before proceeding to access privileges. Therefore, since access privileges are halted, all other steps subsequently following it must halt as well, which would halt the system before it would run.

13. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over the Fee combination as applied above, and further in view of Rompaey et al. US Patent No. 5,870,588 (hereinafter Rompaey).

As per claim 13, the Fee, AAPA, and Bromley combination teach the compilers and metadata, as seen in the rejection for claim 7 above. However, the combination does not teach all the limitations of this claim. These limitations are taught by the Rompaey reference, in combination with the Fee, AAPA, and Bromley references. Rompaey teaches this, such as in col. 5 lines 28-54.

At the time of the invention, it would have been obvious to one of ordinary skill in the art to combine the references of Rompaey with the Fee combination. One of ordinary skill in the art would have been motivated to perform such an addition to provide synthesis tools to allow code to run independently of their design environments. Col. 5 lines 45-55.

***Allowable Subject Matter***

14. Claims 47 and 48 are allowed.

The following is a statement of reasons for the indication of allowable subject matter:

The applicants have amended the claims to overcome the prior art, and have clearly and persuasively argued that the amended claims overcome the prior art of record.

### ***Conclusion***

15. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Art Unit: 2434

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to www. whose telephone number is (571)272-6431. The examiner can normally be reached on M-F, 7:00 am to 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kambiz Zand can be reached on (571) 272-38113811. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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